## 47 ABSTRACT

A stimulus analysis system and artifact rejection method are disclosed. The method may be used in many applications, such as, for example, DPOAE testing, TEOAE testing, BAER testing, ultrasound, MRI, RADAR, GPS, EEG, EKG, or communications. In one embodiment, a system receives a signal, and depending on the noise power of the signal, the signal is placed in one of a plurality of buffers or is discarded. This process is repeated. The combination of buffers that yields the lowest noise power is then selected. The selected combination of buffers may then be used to calculate a signal to noise ratio, which may be used to determine whether the signal received is acceptable, indicating, for example, that a test has been passed or failed.